

CLAIMS

1. A processor-readable medium comprising processor-executable instructions for:

5 comparing a rate of pattern repetition in data to recorded rates of pattern repetition;

determining a content type using the rate of pattern repetition and the recorded rates of pattern repetition; and

10 compressing and decompressing data in a manner appropriate to the content type.

2. A processor-readable medium as recited in claim 1, additionally comprising instructions for:

15 determining data patterns that are frequently found in a first content type and which are infrequently found in a second content type.

3. A processor-readable medium as recited in claim 1, additionally comprising instructions for:

20 examining data of a known content type;
recording rates of pattern repetition found in the data of the known content type.

4. A processor-readable medium as recited in claim 1, additionally comprising instructions for:

25 after the rate of pattern repetition changes, compressing and decompressing data according to a new content type.

12. The system of claim 6, additionally comprising:
a print engine to receive the data after decompression.

13. The system of claim 6, additionally comprising:
5 a learning module, in communication with the data recognition module,
to learn relationships between a plurality of data patterns associated with a
plurality of content types.

14. The system of claim 6, additionally comprising:
10 a pattern library, in communication with the data recognition module, to
store information on relationships between data patterns and content types.

15. The system of claim 6, additionally comprising:
a recognition module, in communication with the data recognition
15 module, to associate data patterns and content types.

16. A printer, comprising:
a data recognition module to recognize a content type of device ready
bits;
20 a compressor to compress the device ready bits according to the content
type of the device ready bits;
a buffer to store the device ready bits after compression and before
decompression;
a decompressor to decompress the device ready bits according to
25 compression of the device ready bits; and
a print engine to receive the device ready bits after decompression.

17. The printer of claim 16, additionally comprising:
a PDL interpreter to interpret a PDL print job and to supply the device
ready bits.

5 18. The printer of claim 16, wherein the data recognition module
additionally comprises:

a learning module to learn relationships between a plurality of data
patterns and a plurality of content types.

10 19. The printer of claim 18, wherein the data recognition module
additionally comprises:

a pattern library to store information on the relationships.

15 20. The printer of claim 16, wherein the data recognition module
additionally comprises:

a recognition module to associate data patterns and content types.

21. A method for data content recognition, compression, and
decompression, comprising:

20 examining data for pattern repetition;

comparing a rate of pattern repetition to recorded rates of pattern
repetition;

determining a content type of the data; and

25 compressing the data in a manner appropriate to the content type of the
data.

22. The method of claim 21, additionally comprising:
decompressing the data in a manner appropriate to the content type of
the data.

5 23. The method of claim 21, wherein the data comprises device ready
bits.

10 24. The method of claim 21, additionally comprising:
examining data of known content type; and
recording rates of data pattern repetition.

15 25. The method of claim 21, additionally comprising:
building a pattern library by recording rates of pattern repetition from
device ready bits from data of known content type.

20 26. The method of claim 21, additionally comprising:
after the rate of pattern repetition changes, compressing and
decompressing device ready bits according to a new content type.

25 27. A processor-readable medium comprising processor-executable
instructions for:

examining data for pattern repetition;
comparing a rate of pattern repetition to recorded rates of pattern
repetition;

25 determining a content type of the data; and
compressing the data in a manner appropriate to the content type of the
data.

28. A processor-readable medium as recited in claim 27, additionally comprising instructions for:

5 decompressing the data in a manner appropriate to the content type of the data.

29. The processor-readable medium of claim 27, wherein the data comprises device ready bits.

10 30. A processor-readable medium as recited in claim 27, additionally comprising instructions for:

examining data of known content type; and
recording rates of data pattern repetition.

15 31. A processor-readable medium as recited in claim 27, additionally comprising instructions for:

building a pattern library by recording rates of pattern repetition from device ready bits from data of known content type.

20 32. A processor-readable medium as recited in claim 27, additionally comprising instructions for:

after the rate of pattern repetition changes, compressing and decompressing device ready bits according to a new content type.

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